

## Urbanisation, the Peri-urban Growth and Zoonotic Disease

Ebola has had significant, negative effects in the rapidly expanding, unregulated areas of peri-urban and urban West Africa. The residents of these areas maintain vital connections with rural populations while intermingling with and living in close proximity to urban and elite populations. These interconnections fuel the spread of Ebola. The degradation of natural resources, temporary housing, inadequate water supplies, hazardous conditions and dense concentrations of people in peri-urban areas exacerbate the potential for zoonotic disease spread. Yet the peri-urban remains largely unacknowledged and under-addressed in development. In considering the intersections between Ebola, peri-urban settlements and urbanisation, we must recognise that: basic hygiene and isolation of the sick are frequently impossible; disease control through quarantine often ignores poor people's patterns of movement and immediate material needs; quarantine can reinforce the political exclusion of peri-urban residents; and there exists the potential for future zoonotic disease emergence in peri-urban contexts. Development must acknowledge these ever-burgeoning settlements and address the ability of the poor to live safely. This includes the provision of decent hygiene and sanitation, context-appropriate forms of disease containment, the recognition of the peri-urban poor as legitimate citizens, and improved understandings of human/animal interactions.

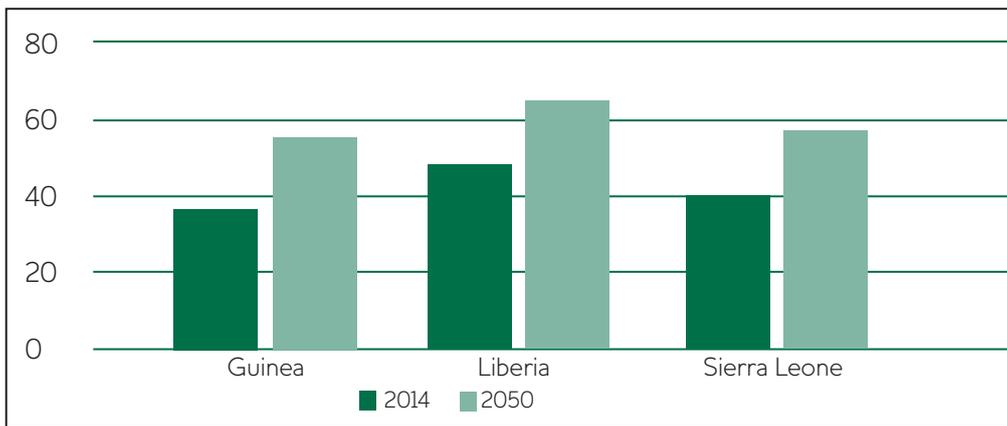
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### Unprecedented urban growth

Ebola entered Monrovia, capital of Liberia, in June 2014. By August, it had reached two more capital cities: Freetown, Sierra Leone, and Conakry, Guinea. It also visited Lagos and Port Harcourt in Nigeria, Makene in Sierra Leone and Bamako in Mali, while briefly skirting cities in India, Spain and the United States. Prior to this, Ebola had seldom entered cities and never before had a capital experienced more than a few isolated cases (World Health Organization 2014).

In recent years, African and Asian urban areas have experienced unprecedented urban growth. Nearly half of all Africa's people (48 per cent) currently live in cities.<sup>1</sup> Capital cities in Africa have experienced 3.5 per cent growth/year over the past two decades (Ncube 2012). Sierra Leone, having urbanised at a rate of 3 per cent/year since 2005, has 97 per cent of its urban residents living in informal settlements. In Liberia, the capital houses a third of the country's total population (Stockman 2014). Conakry, Guinea too has experienced 'excessive' urban growth, with calls for new cities to absorb this expansion (UN-Habitat 2014). This process of urbanisation will continue, with predictions that cities in Africa will be among the 'fastest growing agglomerations' and that 5 per cent of all Africans will be urbanised by 2050 (UN Department of Economic and Social Affairs 2014).

This growth in city populations has tested the limits of city planning and public service delivery. The result is peri-urban sprawl: a liminal space between the city and the hinterland characterised by heterogeneity; exchange of goods and services; very little planning; and lack of regulation.<sup>2</sup> People live cheek-by-jowl in peri-urban spaces, experiencing neither the natural resources of the rural hinterland nor the benefits of urban modernity (Marshall *et al.* 2009). At the city's edge, the peri-urban is for many a place of opportunity, offering a foothold into urban life while retaining rural connections. Here interconnections, networks and movements – from the rural to the urban and vice versa – are critically important. People collaborate and maintain relationships across these spaces, bonds that have been crucial in the dynamics of Ebola transmission (Richards and Chauveau 2007; Lipton 2014).

**Figure 1 Current and predicted urbanisation as a percentage of total population**

Source: Adapted from UN Department of Economic and Social Affairs, Population Division (2014).

## Life in peri-urban spaces

For the very poor, life in peri-urban settlements is characterised by extreme insecurity, low incomes, precarious tenure, a poor education and limited access to, but high dependence on, natural resources. Peri-urban residents experience appallingly inadequate water and sanitation arrangements; massive overcrowding; exposure to toxic and biological threats; a lack of access to, and an inability to utilise, urban services, particularly health. Housing is often temporary, constructed from non-durable materials, in hazardous locations and is highly concentrated. Monrovia's informal settlement West Point houses more than 70,000 people, yet has no running water, no sanitation and no garbage disposal facilities (WHO 2014). A review of 11 informal settlements in Freetown points to the predominance of young adults (aged under 35); intolerable living conditions (two taps between 1,765 people; no access to schools or places of worship; no toilets, no community or recreational centres, no health centres, high crime rates); and to the lack of development agency intervention (CODOHSAPA and FEDURP 2011). Yet peri-urban areas can be properly planned and offer decent services as evidenced by the elite urban enclaves that often exist within peri-urban areas, complete with piped water, electricity and modern conveniences. These enclaves underline how urban development and planning are biased against, and systematically exclude, the poor.

Gostin *et al.* (2014) have raised concerns about Ebola's potential urban spread. However, the international discourse on the disease – focusing on poverty, inadequate health care and cultural practices – has yet to acknowledge the peri-urban context and its role in connecting urban and rural areas. Snyder and colleagues (2014), in highlighting this absence, note that the peri-urban might be the 'perfect breeding ground' for Ebola. Peri-urban populations are frequently highly mobile – migrating to new areas often illegally or clandestinely – as opportunities in one place dry up. Frequent migration between rural homes, urban workplaces and peri-urban residences is also common. These inhabitants are often invisible to state bureaucrats and other officials, a feature that the inhabitants wish to perpetuate. Young people are 'hyper mobile', moving between peri-urban and rural contexts as opportunities arise (Richards and Chauveau 2007).

## Links between Ebola and urbanisation

There are four reasons why it is critical to recognise the links between Ebola and urbanisation. First, the peri-urban lacks basic hygiene, which could pre-empt the spread of zoonotic disease. Over-crowded and lacking in decent sanitation and clean water, there exists a constant risk of faecal contamination. This, coupled with the lack of health facilities for the poor (despite the often close proximity of hospitals and other health institutions), has ramifications for how people deal with Ebola and other diseases. In confined spaces where people often share beds (Lipton 2014), there is no way to avoid human interaction or close contact with bodily fluids; no means to protect against contagion; and no place to isolate the sick (Stockman 2014) or to practise basic hygiene such as hand-washing. There is also no way to clean vomit and diarrhoea from a peri-urban home without risking exposure.

Second, conventional approaches to contagious disease, such as quarantine, are impossible to sustain. Poor peri-urban residents, with no money to purchase and store in bulk, buy essentials daily (Lipton 2014). When lock-down, intended to halt disease spread, occurs, shops, markets and transport facilities are closed, reducing opportunities for peri-urban residents to work and earn cash for food. Many of their activities continue clandestinely, undermining the health intervention (Richards and Chauveau 2007; Stockman 2014). During attempts in West Point to contain the spread of Ebola, people found new ways of moving through the area quarantined in August 2014. Their concern was not exposure to Ebola, but their inability to access food and water. As people shoved and pushed for humanitarian relief, rice and water, violence erupted, exposing them further to blood, sweat and saliva (Onishi 2014).

Third, peri-urban contexts are often characterised by political instability. They are often excluded from rural and urban jurisdictions, partly because uncontrolled urban growth leaves authorities unable (and often unwilling) to cope; partly because residents are often illegal, informal or unrecognised and have little or no political influence. The peri-urban is often perceived as disorderly, dirty and requiring ‘sanitisation’ – in other words, relocating the poor and enabling regulated, elite urban growth. Ironically, the poor residents’ most pressing need – sanitation – becomes a means to undermine their resilience and status, further disenfranchising them from the state. In the face of Ebola, and with the pressure on governments to act, the peri-urban area becomes an attractive place to intervene. The deployment of the military and the police to quarantine the peri-urban is a tangible manifestation of state power that is oppressive for residents (Onishi 2014). Thus quarantine-related activities fulfil the political role of assuaging the urban elite’s fears of contagion – ‘cleaning up’ the peri-urban by excluding the poor, rather than helping them or addressing the key challenges of the disease.

Finally, there is future zoonotic disease spread. Ebola originates in rural areas and has tended to remain there until recently. ‘Spillover’ events from primates and bats to humans are thought more likely to occur in rural areas. Yet assumptions that urban areas are devoid of wildlife and that bushmeat consumption is a rural phenomenon are problematic. In the peri-urban periphery, rural agricultural and urban industrial activities co-exist for various reasons: poor people often bring their animals when they migrate; agricultural intensification (chicken and pig farming) often co-exists with small-scale subsistence farming; and to supply the growing urban demand for fresh foodstuff. There are also often strong disincentives to report animal disease. Some wild species – bats, birds and rodents – thrive in peri-urban contexts, and are caught and sold in urban markets. Agricultural expansion and intensification; the loss of wildlife habitat; environmental destruction; and the introduction of new species into the peri-urban have thus massively increased the scope for wild/domestic animal interactions.

Urbanisation in Africa will continue apace. Some cities will accommodate up to 85 per cent of a country’s population. This will result in more peri-urban growth, more settlements and greater challenges of poverty, inequality and sustainability. In turn this may enhance conditions for potential zoonotic disease emergence and spread.

## Implications for development policy

Urgent development attention must be paid to the peri-urban periphery and informal settlements. But development itself has to change. Projects installing a few hand-pumps will not provide water security and sustainability for all peri-urban residents. Rather, new and radical approaches are needed. The peri-urban is underdeveloped and poor; its residents cannot access decent health services because this area is not a priority for development. What is required is a developmental focus on the particular social, epidemiological and ecological conditions of fast-growing, informal settlements in Africa. This must address the sanitisation priorities of poor people, while explicitly rejecting the notion of a sanitised urban environment devoid of the poor and poverty.

Four recommendations emerge, each related to the four reasons outlined above:

1. Provision for decent hygiene in peri-urban contexts is critical to avoid epidemics such as the Ebola outbreak. Basic hygiene and living conditions in these areas must be addressed. Health information must be provided but it must recognise the conditions in which most of Africa’s populations live and offer appropriate forms of personal hygiene to minimise disease spread.
2. New forms of disease containment must be developed which acknowledge the structural conditions of poverty and address poor people’s immediate livelihood needs (clean water, food, safety).
3. Peri-urban and informal settlements must become development priorities, with the recognition of poor peri-urban residents as legitimate, urban residents with a role to play in the upgrading and management of their environments.
4. More understanding of human/animal interactions and the potential for zoonotic disease emergence is required. This should build on the knowledge and awareness of people closest to animals and avoid penalising the reporting of animal disease.

<sup>1</sup>There is no globally applicable definition of urban settlements. Cities are usually defined on the basis of one or several characteristics (population density, non-agricultural economic activities, urban infrastructure), and the presence of secondary or tertiary services (schools, universities, hospitals). National definitions vary and often neglect peri-urban peripheries, informal settlements or new residents who might be classified as ‘illegal’ or ‘temporary’. National urbanisation figures thus frequently underestimate the numbers of people resident in cities (UN Department of Economic and Social Affairs 2014).

<sup>2</sup>Some definitions of the peri-urban refer to physical places (the geographic edge between cities and countryside); others emphasise a sociological concept (the interface between rural and urban activities, institutions and ideas); and others the process of urbanisation (the transition from rural to urban, and movement of goods and people between these spaces and an indeterminacy in terms of legal and policy status). Here the peri-urban is conceptualised as a dynamic, shifting, indeterminate and ambiguous place and/or space with significant flows (of people, material products, resources, ideas) within it as well as between rural and urban locations (Marshall *et al.* 2009).

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## Further reading

Lipton (2014); Marshall *et al.* (2009); Onishi (2014); Richards and Chauveau (2007); Snyder, Marlow and Riley (2014); Stockman (2014).

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